This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1.(CURRENTLY AMENDED) A method for producing an abrasion resistant coating composed of a ceramic/metal material system or a ceramic/ceramic material system, the method comprising the steps of:

blending micron-scale particles of a hard phase material arranged in particle aggregates with nano-scale particles of a binder phase material to form a uniform powder mixture;

aggregating the powder mixture to bond the nano-scale particles to the micron-scale particles thereby forming a feedstock powder comprised of aggregated particles; and

thermal spraying the feedstock powder of particle aggregates onto a substrate thereby forming the abrasion resistant coating thereon, the coating composed of the micron-scale particles of the hard phase material fused together with the binder phase material.

2.(CANCELED)

3.(CURRENTLY AMENDED) The method according to claim ~~2~~ 1, wherein the particles are different sizes.

4.(ORIGINAL) The method according to claim 3, wherein the particles are different in composition.

5.(CURRENTLY AMENDED) The method according to claim ~~2~~ 1, wherein the particles are different in composition.

6.(ORIGINAL) The method according to claim 1, further comprising the step of agglomerating the powder mixture formed in the blending step prior to performing the aggregating step.

7.(ORIGINAL) The method according to claim 6, wherein the agglomerating step is performed by spray drying and the particle aggregates are each about 5 to 50 microns in diameter.

8.(ORIGINAL) The method according to claim 1, wherein the hard phase material includes one of a ceramic or a ceramic/metal composite.

9.(ORIGINAL) The method according to claim 1, wherein the binder phase material includes one of a metal, ceramic and ceramic/metal composite.

10.(ORIGINAL) The method according to claim 1, wherein the micron-scale particles of the hard phase material comprises between 50 and 90 volume percent of the blended powder mixture.

11.(ORIGINAL) The method according to claim 1, wherein the micron-scale particles of the hard phase material comprises 70 volume percent of the blended powder mixture.

12.(ORIGINAL) The method according to claim 1, wherein the aggregating step is performed by heat treating.

13.(ORIGINAL) The method according to claim 1, wherein during the thermal spraying step the nano-scale particles of the binder phase material are selectively melted, the melted particles filling pore spaces between heated and softened ones of the micron-scale particles, thereby effectively binding the micron-scale particles together and densifying the coating.

14.(ORIGINAL) The method according to claim 13, wherein during the thermal spraying step the melted particles experience a cooling rate which generates one of an amorphous nanocrystalline or microcrystalline binder phase.

15.(ORIGINAL) The method according to claim 1, wherein the ceramic/metal material system is selected from the group consisting of WC/Co, Cr_3C_2/NiCr, TiC/Fe, metal boride/metal, and metal nitride/metal and the ceramic/ceramic material system is selected from the group consisting of Al_2O_3, YSZ, Al_2O_3/TiO_2, ZrO_2/MgO, and Cr $_2O_3/SiO_2$.

16.(CURRENTLY AMENDED) A method of making a feedstock powder for use in producing thermal spray abrasion resistant coatings composed of a ceramic/metal material system or a ceramic/ceramic material system, the method comprising the steps of:

blending micron-scale particles of a hard phase material arranged in particle aggregates with nano-scale particles of a binder phase material to form a uniform powder mixture; and

aggregating the powder mixture to bond the nano-scale particles to the micron-scale particles thereby forming particle aggregates.

17.(CANCELED)

18.(CURRENTLY AMENDED) The method according to claim ~~17~~ 16, wherein the particles are different sizes.

19.(ORIGINAL) The method according to claim 18, wherein the particles are different in composition.

20.(CURRENTLY AMENDED) The method according to claim ~~17~~ 16, wherein the particles are different in composition.

21.(PREVIOUSLY AMENDED) The method according to claim 16, further comprising the step of agglomerating the powder mixture formed in the blending step prior performing the aggregating step.

23.(PREVIOUSLY AMENDED) The method according to claim 16, wherein the hard phase material includes one of a ceramic or a ceramic/metal composite.

24.(PREVIOUSLY AMENDED) The method according to claim 16, wherein the binder phase material includes one of a metal, ceramic and ceramic/metal composite.

25.(PREVIOUSLY AMENDED) The method according to claim 16, wherein the micron-scale particles of the hard phase material comprises between 50 and 90 volume percent of the blended powder mixture.

26.(PREVIOUSLY AMENDED) The method according to claim 16, wherein the micron-scale particles of the hard phase material comprises 70 volume percent of the blended powder mixture.

27.(PREVIOUSLY AMENDED) The method according to claim 16, wherein the aggregating step is performed by heat treating.

28.(PREVIOUSLY AMENDED) The method according to claim 16, wherein the ceramic/metal material system is selected from the group consisting of WC/Co, Cr_3C_2/NiCr, TiC/Fe, metal boride/metal, and metal nitride/metal and the ceramic/ceramic material system is selected from the group consisting of Al_2O_3, YSZ, Al_2O_3/TiO_2, ZrO_2/MgO, and Cr_2O_3/SiO_2.

29.(CANCELED)

30.(CANCELED)

31.(CANCELED)

32.(CANCELED)

33.(CANCELED)

REMARKS

Claims 1, 6-16 and 21-33 are pending and stand finally rejected. The Advisory Action of October 17, 2003 indicated that claims 1, 3-16 and 18-28, as amended in the reply filed on October 1, 2003, would be allowable if submitted in a separate, timely filed amendment canceling non-allowable claims 29-33. Accordingly, this communication cancels claims 29-33 and repeats the amendments to claims 1, 3, 5, 16, 18, and 20, and the cancellation of claims 2 and 17, made in the October 1, 2003 reply. Specifically, independent claim 1 has been amended with the patentable subject matter of canceled claim 2, and now recites "...a hard phase material *arranged in particle aggregates...* ," and independent claim 16 has been amended with the patentable subject matter of canceled claim 17, and now recites "...a hard phase material *arranged in particle aggregates...* ."

Claims 16 and 21-27 stand finally rejected under 35 USC 102(b) as being anticipated by US Patent 5120693 to Connolly *et al.* (Connolly).

This rejection is moot in view of the addition of the patentable subject matter of canceled claim 17 to independent claim 16. Accordingly, withdrawal of the 35 USC 102(b) rejection using Connolly is respectfully requested.

Claims 1, 6-15 and 28-33 stand finally rejected under 35 USC 103(a) as being unpatentable over Connolly as applied to claims 16 and 21-27 above, and further in view of WO 97/18341 (the '341 document).

This rejection is moot in view of the addition of the patentable subject matter of canceled claim 2 to independent claim 1 and the cancellation of claims 29-33. Accordingly, withdrawal of

the 35 USC 103(a) rejection using Connolly in view of the '341 document is respectfully requested.

Applicants' reserve to the right to file a continuation application with claims 1, 6-16, and 21-33, as set forth in the amendment filed on June 18, 2003, because the basis for the final rejection of claims 1, 6-16 and 21-33 is believed to be flawed. The Office Action states in the "Response to Arguments" section that "While applicant has defined 'aggregate' as 'clusters of bonded particles that cannot be easily separated from one another by mechanical means' (page 6, last paragraph) and 'agglomerate' as 'capable of being mechanically separated' (page 7, first paragraph), and applicant may be his own lexicographer, this definition only applies to applicant's disclosure. Therefore, the mere fact that Connolly uses the term agglomerate does not necessarily mean that agglomerates within applicant's definition are provided".

According to MPEP 2111.01, during examination, the claims must be given their plain meaning unless applicant has provided a clear definition in the specification. See also *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). A clear definition is provided for the claim term "aggregating" in applicants' specification, which states on page 6 that aggregated particles are "clusters of bonded together particles that cannot be easily separated from one another by mechanical means, " and on page 7 that "Agglomerated particles differ from aggregated particles in that they are capable of being mechanically separated from one another." The Office Action's refusal to give the term "aggregating" the clear meaning provided in applicant's specification is improper.

The Office Action further states that "The plain meaning of agglomerate would be 'to gather into a ball, mass or cluster' or 'a jumbled mass or collection'; and aggregate would be 'to

collect or gather into a mass or whole' (Webster's Ninth New Collegiate Dictionary, 1990, page 64). Thus, even though Connolly uses the term agglomerate, an aggregate as defined by applicant could be provided".

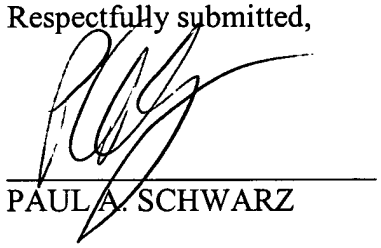
Arguably, even if the Applicants' specification had not provided a clear definition in the specification for the claim term "aggregating," the "plain meaning" afforded this term in the Office Action is improper as it has been obtained from a non-technical Dictionary, and not from those of ordinary skill in the art, as required by MPEP 2111.01.

The Advisory Action of October 17, 2003 further states, regarding the term "aggregating," that Applicants' definition of this term does not have to be used when interpreting the teachings of the prior art. It is respectfully submitted that there is absolutely no support for this position in the law. Moreover, the "agglomerating" step of Connolly, which according to the Office Action means to "gather into a ball, mass or cluster' or 'a jumbled mass or collection", is not the same as the claimed "aggregating" step which requires "clusters of bonded together particles that cannot be easily separated from one another by mechanical means." Accordingly, Connolly does not disclose, teach or suggest this limitation.

Favorable reconsideration of this application is respectfully requested as it is believed that all outstanding issues have been addressed herein and, further, that claims 1, 3-16, and 18-28 are in condition for allowance, early notification of which is earnestly solicited. Should there be any questions or matters whose resolution may be advanced by a telephone call, the examiner is cordially invited to contact applicants' undersigned attorney at his number listed below.

No fee is believed to be required for this communication. The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR 1.16 and any patent application processing fees under 37 CFR 1.17, which are associated with this communication, or credit any overpayment to Deposit Account No. 50-2061.

Respectfully submitted,



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